

500,365

23 JUN 2003

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
10 July 2003 (10.07.2003)

PCT

(10) International Publication Number  
**WO 03/056594 A1**

(51) International Patent Classification<sup>7</sup>: **H01H 71/12**,  
H02B 13/035

Pavia (IT). **MAHONEN, Pentti** [FI/FI]; Korpinkatu 5,  
FIN-65320 Vaasa (FI). **REUBER, Christian** [DE/DE];  
Niederheide 17°, 47877 Willich (DE).

(21) International Application Number: PCT/EP02/14887

(22) International Filing Date:  
27 December 2002 (27.12.2002)

(74) Agent: **GIAVARINI, Francesco**; Zanoli & Giavarini Srl,  
Viale Bianca Maria, 35, I-20122 Milano (IT).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
01205245.2 28 December 2001 (28.12.2001) EP

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,  
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): **ABB TD  
TECHNOLOGY LTD.** [CH/CH]; Affolternstrasse 44,  
P.O. Box 8131, CH-8050 Zurich (CH).

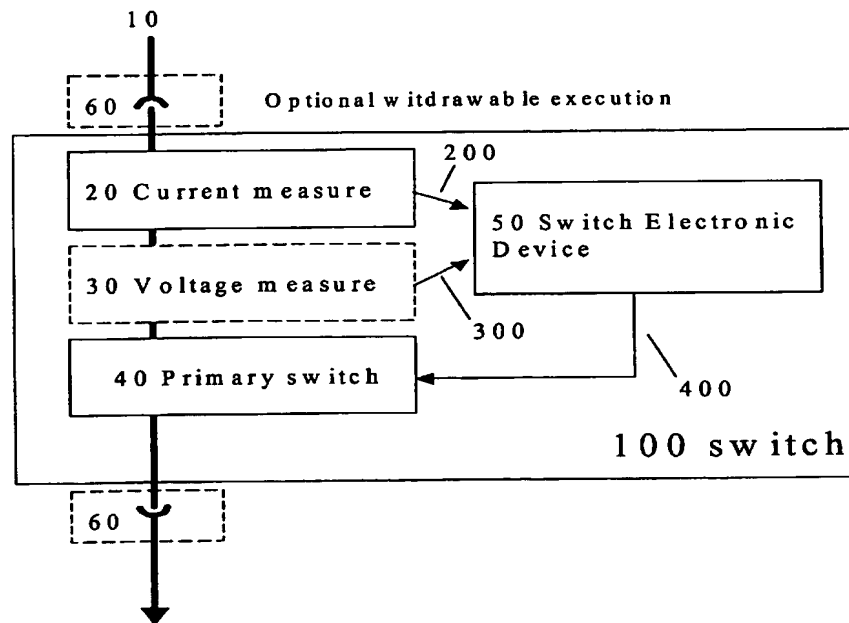
(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,  
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **COLOMBO,**  
**Alessandro** [IT/IT]; Via Bianchi Mosè, 93, I-20149 Mi-  
lano (IT). **GEMME, Carlo** [IT/IT]; Via Aselli, 5, I-27100

[Continued on next page]

(54) Title: CIRCUIT BREAKERS WITH INTEGRATED CURRENT AND/OR VOLTAGE SENSORS



(57) Abstract: A circuit breaker (100), in particular a medium voltage circuit breaker, having a current (20) and/or a voltage measuring device (30) integrated thereon. The integration can be functional and/or physical. The functionally integrated current and/or voltage measuring device provides primary current and voltage representative signals to an on-board electronic device (50) in order to realize the measure, process, and protection functions as a whole.



WO 03/056594 A1